

ABSTRACT OF THE DISCLOSURE

A method and system for determining a three-dimensional surface profile of an object comprising a plurality of object points. First, a grating projector is provided to
5 direct an incident beam of light having a pattern at the object. Then, a resultantly formed grating image of a line profile of the object is received and stored in a multi-line photoelectric image device. Next, the outputs of the grating projector and the multi-line photoelectric image
10 device are taken together to form the phase shifter and the object is shifted opposite to a phase shifter. The above steps are repeated until all object points are imaged on the multi-line photoelectric image device. Finally, a phase of each object point is determined, each phase transformed and
15 rectified to a height by an appropriate trigonometric algorithm for viewing on a display device.